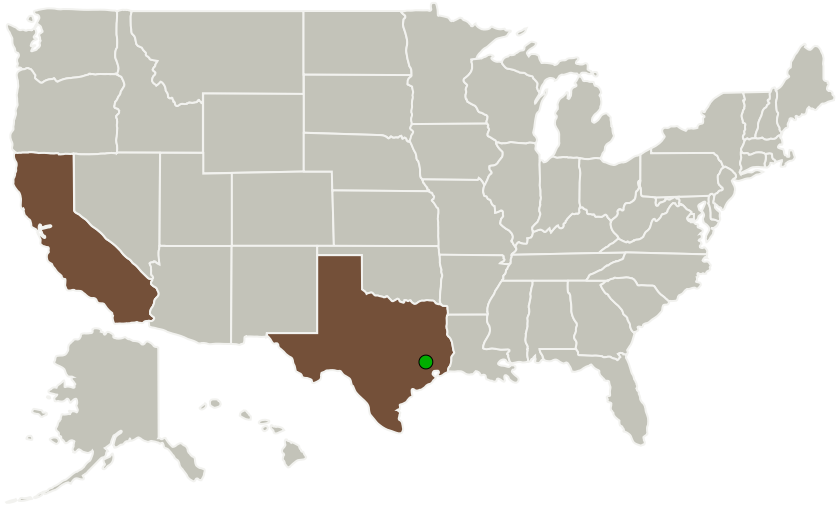
Novel Fluid Preservation System, Phase I

Completed Technology Project (2010 - 2010)

Project Introduction

To address NASA's need for a method to preserve blood and urine samples from astronauts collected during flight, Chromologic (CL) proposes to develop a novel Fluid Preservation System (FPS). FPS is based on collecting and sealing fluids in a sterile, hermetically sealed volume, with automatic separation of supernatant fluid where necessary. The unique microfluidic and medical expertise of CL scientists will result in an innovative and lightweight fluid storage system that utilizes compact and rugged sterile microfluidic chips. FPS chips will be able to collect and effectively store blood and urine for time spans of years if necessary. In Phase I CL will demonstrate the feasibility of the FPS technology by building prototype chips and demonstrating the proof of concept of pumping, separation, storage and preservation. In Phase II CL will develop a fully functional system including compact processing devices and miniaturization of the chips

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
ChromoLogic, LLC	Lead Organization	Industry Minority-Owned Business	Monrovia, California
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Novel Fluid Preservation System, Phase I

Table of Contents

Novel Fluid Preservation System, Phase I

Completed Technology Project (2010 - 2010)

Primary U.S. Work Locations	
California	Texas

Project Transitions

January 2010: Project Start

July 2010: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/140076)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

ChromoLogic, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

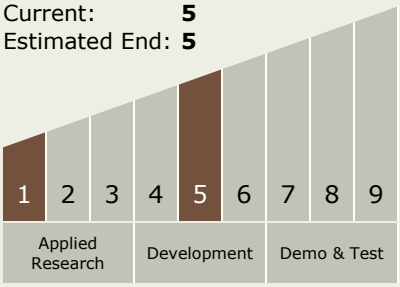
Carlos Torrez

Principal Investigator:

Nicholas Booth

Technology Maturity (TRL)

Start: **1**
Current: **5**
Estimated End: **5**



Novel Fluid Preservation System, Phase I

Completed Technology Project (2010 - 2010)

Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.3 Human Health and Performance
    - TX06.3.1 Medical Diagnosis and Prognosis

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System